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June 9, 2006

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 06-OII-1
1516 Ninth Street
Sacramento, CA 95814-5512

DOCKET
06-OII-1

DATE May 9 2006

RECD. Jun 12 2006

Dear California Energy Commission:

We make the following comments on the DRAFT OUTLINE for Statewide Guidelines for Reducing Wildlife Impacts from Wind Energy Development issued May 26, 2006.

1. PRE-PERMITTING ASSESSMENT/MONITORING

Preliminary Information Gathering

Numerous studies of avian mortality have shown that the nocturnal flight behavior of most migratory birds makes them particularly susceptible to collisions with a variety of man-made structures.¹

The presence, magnitude, movements and timing of migratory songbirds over a project site can be detected early in the wind development process by the interpretation of a representative sample of multi-year radar that is publicly available from military and weather installations such as Edwards AFB in Southern California. Currently this is not done by wind farm projects.

For the purposes of these comments, we consider migratory songbirds to be a distinct group of migratory birds with different habits and behaviors than other migratory birds such as shorebirds and waterfowl.

We recommend that this publicly available radar be used to determine migratory bird magnitude, movements and timing of project sites as well as entire Wind Resource Areas. This publicly available radar is available over a multi-year period and can be synchronized with topographical maps and weather data to create a predictive and possibly preventive model to protect migratory songbirds.

This publicly available radar can be interpreted to determine magnitude and timing of bird migrations, which come in pulses over a broad front. From a multi-year analysis, certain threshold magnitudes of activity over a project site should trigger additional on-site radar study over a multi-year period to determine the timing and use of the site by birds within altitudinal range of the turbines. We recommend that the Commission consider developing the determination of a threshold that would trigger these additional studies.

We contend that birds may fly at low altitudes through the site even though they may not be detected on the site during morning or afternoon "point counts" currently employed by wind energy companies in pre-construction studies.

Interpretation of publicly available radar data would not be a financial burden to a wind developer (\$10,000-20,000) and may save costs of further studies. We recommend that guidelines could allow Developer to voluntarily mitigate in place of required further studies (see MITIGATION below).

If interpretation is done in the first year, there is time to complete multi-year studies using radar, mist netting and acoustic monitoring if required.

¹ McCrary, et al, Nocturnal Avian Migration Assessment of the San Geronio Wind Resource Study Area, Fall, 1982, for Southern California Edison, p.73

There are two fully protected species of songbird that migrate through Southern California are Yellow-billed Cuckoo and SW Willow Flycatcher.

Pre-permitting Field Surveys

Despite the importance of the Pacific Flyway to the international north-south migration of songbirds protected by law and ranging from Ecuador to the Bering Sea, there has been only one nocturnal pre-construction avian study on migratory songbirds using radar on a wind project site in the state of California. That was published in 1982, almost twenty five years ago.

The study was conducted at San Geronimo pass for Southern California Edison by Michael McCrary, Robert L. McKernan, Ross E. Landry, William D. Wagner, and Ralph Schreiber.

Among the conclusions of the study were:

1. An estimated 70 million songbirds pass through this one pass in Southern California yearly²;
2. Migratory songbirds are most vulnerable to collision in the first 2-3 hours after sunset³ as they begin to gain altitude for the night's flight. (Again, we contend that birds that might not be detected in "point counts" during the light of day may fly through the site as they gain altitude from locations outside the "point count" area). Similarly, collisions will probably be much more infrequent after midnight., but increase in vulnerability 2 to 3 hours before dawn.
3. a distinct portion of all migrants were below 111 m (12.9%).⁴
4. Wind turbines constructed along ridges may potentially result in the greatest number of collisions as the altitude of birds in relation to ground level decreases as they fly over a ridge and is probably lowest at the crest.⁵

In Southern California's other large wind resource, the Tehapi Wind Resource Area which includes the Mojave foothills of Kern County and is currently the site of the fastest growth of development of wind energy, the definitive resource study by Dick Anderson did not address migratory birds, except to state "Little is known about nocturnal and migratory bird movements through the Tehachapi area.⁶" This is further proof of the need to study this invaluable biological resource, and to begin to address the cumulative impacts of wind energy on migratory songbirds.

2. IMPACT ANALYSIS

We believe that the **impact analysis** cannot be accurately achieved in areas where it is shown that migratory songbirds pass over and/or through wind projects without multi-year, daily nocturnal studies using radar, mist netting and acoustic monitoring during the Fall and Spring periods (April 15 to May 30 and September 1 to October 30).

We contend that the **impact analysis** must also include an analysis of the impacts on birds from the towers, lines and construction of transmission lines that deliver the energy to the distribution center or the end user, especially if new construction is required. Over 99% of all bird kills at a tower in Illinois were passerines (mostly migratory songbirds – writer's note) (grabber 1968), while 86% were passerines (mostly migratory songbirds – writer's note) at a 366 m tower in North Dakota (Avery et al. 1978).⁷

3. POST-CONSTRUCTION MONITORING/REPORTING

Songbird carcasses are underreported in "mortality" counts due to loss of biomass on impact and to scavengers. There are no studies of what happens to songbirds when they collide with turbines in order to adjust "mortality" studies scientifically to more accurately predict behavior and prevent mortality. We contend that nocturnal studies using radar are more effective

² Ibid, p. 72, and McCrary, et al, Nocturnal Avian Migration Assessment of the San Geronimo Wind Resource Study Area, Spring, 1982, for Southern California Edison, p. 104

³ Ibid, p. 96

⁴ McCrary, et al, Nocturnal Avian Migration Assessment of the San Geronimo Wind Resource Study Area, Spring, 1982, for Southern California Edison, p. 104

⁵ McCrary, et al, Nocturnal Avian Migration Assessment of the San Geronimo Wind Resource Study Area, 1982, for Southern California Edison.

⁶ Anderson, et al, Avian Monitoring and Risk Assessment at the Tehachapi Pass Wind Resource Area, September 2004

⁷ McCrary, et al, Nocturnal Avian Migration Assessment of the San Geronimo Wind Resource Study Area, Fall 1982, for Southern California Edison

in counting migratory songbirds colliding with turbines at night to determine cumulative impacts, although endangered species may not benefit from radar studies.

Recommendation:

CEC/F&G initiate a control study of songbirds and wind turbines to analyze what happens to the songbirds before, during and after they collide with the turbines in order to set scientific standards for extrapolation of body counts, and to evaluate the effectiveness of “body counts”.

CEC/F&G guidelines include post-construction radar monitoring if migratory songbirds have been detected above or on a wind energy site.

CEC/F&G guidelines provide for fast retrieval of carcasses, and nets to catch carcasses, under turbines where endangered species may be migrating during their migratory periods.

5. MITIGATION

We recommend that developers of projects where initial radar analysis has shown the presence of migratory songbirds be rewarded if they voluntarily turn off the turbines during migration periods of spring (April 15 – May 30) and fall (Sept 1 – Oct 30) or for migratory periods for endangered species, if different, during the hours most vulnerable to migratory birds (2 to 3 hours after sunset, and 2 to 3 hours before dawn).

The only post-construction mitigation measures for migratory songbirds are seasonal part-time shutdowns or turbine removal. There is no financial compensation that could compensate for loss or obstruction of a migratory flyway. There is no alternative habitat to a migratory flyway.

Thank you for the opportunity to comment and participate in this workshop.

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